

REMARKS

The Office Action dated July 19, 2004 has been received and carefully noted. The above amendments to the claims and the following remarks are submitted as a full and complete response thereto.

Claims 6, 10, 17, 18 and 21 have been amended to more particularly point and distinctly claim the invention. No new matter has been added, and no new issues are raised which require further consideration and/or search. Claims 14-23 have been allowed. Claims 1-13 are submitted for consideration.

As a preliminary matter, the Office Action indicated that claim 4 contains allowable subject matter, and would be allowable if amended to be in independent form. Applicants thank the Examiner for indicating the allowability of claim 4. However, for the reasons outlined below, Applicants submit that claim 1, upon which claim 4 is dependent, is distinguishable over the cited prior art reference.

Applicant also thanks the Examiner for indicating the allowance of claims 14-23.

Claim 1 was rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,711,143 to Balazinski et al. The rejection is traversed as being based on a reference that neither teaches nor suggests the novel combination of features clearly recited in independent claim 1.

Claim 1, upon which claims 2-13 depend, recites a method of communicating data between a Base Station System (BSS) and a Serving GPRS Support Node (SGSN). The method includes the step of providing protocol data and associated functions, including

encapsulating a data packet with a User Datagram Protocol (UDP) and a Internet Protocol (IP). The UDP includes a UDP port associated with a Network Service Virtual Connection (NS-VC), and the IP provides an IP address associated with a Network Service Entity (NSE). The method also includes the step of transmitting the data packet provided with the protocol data.

As outlined below, Applicant submits that the cited reference of Balazinski does not teach or suggest the elements of claim 1.

Balazinski teaches a method of converting a Gb interface to IP while continuing to support Frame Relay and without adversely affecting the interface's performance. Col. 3, lines 19-21. Instead of encapsulating Frame Relay information in IP packets, Balazinski modifies the lower NS sub-layer. Col. 3, lines 21-24. Balazinski includes a Base Station System (BSS) and a Serving GPRS Support Node (SGSN) both of which use a protocol stack including a physical layer, a network service (NS) layer including a NS-Sub-Network Service (NS-NSS) layer and a NS-Sub-Network Control (NS-NSC) layer, and Base Station System GPRS Protocol (BSSGP) layer. Col. 3, lines 27-40. The primary function of the BSSGP layer is to provide radio-related QoS, and routing information that is required to transmit user data between a BSS and an SGSN. Col. 3, lines 41-45. On the BSSGP layer, there are a Point-to-Point (PTP) functional entity, a Point-to-Multipoint (PTM) functional entity and a signaling (SIG) functional entity. Col. 3, lines 64-67. The existing NS layer adapts the BSS to the Frame Relay protocol and the main function of the NS layer is to provide transportation for BSSGP Virtual Circuits (BVC) over a Frame

Relay network. Col. 4, lines 15-18. The primary functions of the existing NS-NSC sub-layer are transmission of NS Service data units (SDU), load sharing between different NS virtual circuits and NS virtual circuit management. The primary functions of the existing NS-SNS layer are providing access to the Frame Relay network or the NSE peer identity by means of a Network Service-Virtual Link (NS-VL), providing NS virtual circuits between peer NSEs, transferring NS SDUs in sequence order on each NS virtual circuit unless order is not required and indicating to the upper layer the availability/unavailability of an NS virtual circuit. Col. 4, lines 42-67. The protocol stack includes a physical layer, a link layer an Internet Protocol (IP) Layer, a User Datagram Protocol (UDP) layer, a modified NS layer that is divided into an NS-SNS layer and an NS-NDC layer and the BSSGP layer which is unchanged from the existing protocol stack. Col. 5, lines 1-6.

Balazinski transports information from the SGSN functional entities to the BSS functional entities and instead of using Frame Relay virtual circuits, uses IP packets following multiple routes between end points over a connectionless IP network. The modified Gb interface uses a USP layer over an IP layer. One UDP port is reserved in order to make the modified NS layer and the BSSGP layer act as an application over the IP stack. Col. 5, lines 14-48.

Applicants submit that Balazinski simply does not teach or suggest each of the elements recited in claim 1. Claim 1, in part, recites providing protocol data and associated functions, including encapsulating a data packet with a User Datagram Protocol (UDP) and a Internet Protocol (IP), wherein the UDP includes a UDP port

associated with a Network Service Virtual Connection (NS-VC) and, the IP provides an IP address associated with a Network Service Entity (NSE). The Office Action cites column 5, lines 1-6 and figure 3 of Balazinski as teaching encapsulating a data packet with a User Datagram Protocol (UDP) and a Internet Protocol (IP). However, the cited section of Balazinski merely teaches that the protocol stacks includes a physical layer, a link layer, an IP layer a UDP layer, a modified NS layer and a BSSGP layer. Applicants submit that there is simply no teaching or suggestion in Balazinski of **encapsulating** a data packet with a User Datagram Protocol (UDP) and a Internet Protocol (IP) as clearly recited in claim 1. In fact, col. 3, lines 21-24 of Balazinski teaches away from **encapsulating** a data packet with a User Datagram Protocol (UDP) and a Internet Protocol (IP) as recited in claim 1. Col. 3, lines 21-24 of Balazinski teaches that instead of encapsulating Frame Relay information in IP packets, the lower NS sub-layer is modified. Therefore, Applicants respectfully assert that the rejection under 35 U.S.C. §102(e) should be withdrawn because Balazinski fails to teach or suggest each feature of claim 1.

Claims 2 and 5-13 were rejected under 35 U.S.C. 103(a) as being unpatentable over Balazinski in view of the admitted prior art of WO 99/16266 to Forslow. The rejection is traversed as being based on references that neither teach nor suggest the novel combination of features clearly recited in independent claim 1.

Claims 2 and 5-13 depend on claim 1 and thus incorporate all of the elements of claim 1. Forslow does not cure the deficiencies of Balazinski. Forslow teaches that a

mobile station and a mobile network gateway node each include a mapper for mapping an individual application flow to one of the circuit-switched network and a packet-switched network bearer depending on the quality of service requested for the individual application flow. Applicants submit that there is no discussion or suggestion in Forslow of encapsulating a data packet with a User Datagram Protocol (UDP) and an Internet Protocol (IP), wherein the UDP includes a UDP port associated with a Network Service Virtual Connection (NS-VC) and, the IP provides an IP address associated with a Network Service Entity (NSE) as recited in claim 1. Therefore, Applicants respectfully assert that the rejection under 35 U.S.C. §103(a) should be withdrawn because neither Balazinski nor Forslow, whether taken singly or combined, teaches or suggests each feature of claim 1 and hence, dependent claims 2 and 5-13 thereon.

Claim 3 was rejected under 35 U.S.C. 103(a) as being unpatentable over Balazinski in view of U.S Patent No. 6,636,502 to Lager et al. The rejection is traversed as being based on references that neither teach nor suggest the novel combination of features clearly recited in independent claim 1.

Claim 3 is also dependent on claim 1 and thus incorporates all of the elements of claim 1. Applicants submit that there is no discussion or suggestion in Lager et al. of encapsulating a data packet with a User Datagram Protocol (UDP) and a Internet Protocol (IP), wherein the UDP includes a UDP port associated with a Network Service Virtual Connection (NS-VC) and, the IP provides an IP address associated with a Network Service Entity (NSE) as recited in claim 1. Therefore, Applicants respectfully assert that

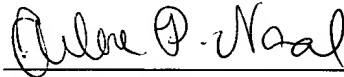
the rejection under 35 U.S.C. §103(a) should be withdrawn because neither Balazinski nor Lager et al., whether taken singly or combined, teaches or suggests each feature of claim 1 and hence, dependent claim 3.

As noted previously, claims 1-13 recite subject matter which is neither disclosed nor suggested in the prior art references cited in the Office Action. It is therefore respectfully requested that all of claims 1-13 be allowed, in addition to allowed claims 14-23, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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IN THE DRAWINGS

The attached replacement sheet of formal drawings replaces the original sheet.

Attachment: Replacement Sheet